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IMPROVING THE RIGOUR OF VACTERL SCREENING FOR NEONATES WITH ANORECTAL MALFORMATIONS

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Aim of the Study: Screening investigations for the VACTERL (Vertebral, Anorectal, Cardiac, Tracheo-Esophageal, Renal and Limb) association form an important part of the management of neonates with anorectal malformations (ARMs). Clear standards will increase the likelihood that each investigation will be performed appropriately, reported and the results acted on. We developed a proforma to define required investigation and indications for referral. The aim of the current study was to determine the effect of introducing a proforma across multiple centres.

Methods: Four UK centres performed a 3-year retrospective audit of consecutive neonates with ARM. Following introduction of a proforma the same data were collected prospectively for consecutive neonates over a further 2 years. The appropriate investigation of each component of the VACTERL association and the corresponding referral required for each abnormal result were defined. The proportion of patients undergoing appropriate investigation and referral was compared against these standards. An audit standard of 90% was set for each criteria.

Main Results: Prior to implementation of the proforma, 86 patients were audited, with a further 69 patients after. One patient was excluded as the notes were not available for review and 5 patients had clinically justifiable omissions in screening due to early demise (3 tracheal agenesis, 1 extreme prematurity with oesophageal atresia and 1 renal agenesis). The audit standard was met in 7 criteria before introduction of the proforma in comparison to 10 criteria afterwards. Comparison of results before and after introduction of the proforma is shown in table 1.

Conclusion: The completeness of VACTERL screening and its documentation improved following introduction of the proforma. Implementation in other centres may have a similar effect. Performance remains imperfect. Reviewing some criteria (eg the definition of adequate screening of vertebra, indication for echo in low ARM) may help address this.

VACTERL component Test	Before Proforma Test Performed %	After Proforma Test Performed %	Before Proforma Appropriate Referral %	After Proforma Appropriate Referral %
Thoracic to sacral vertebral bodies on AP Xray reported	76	94	80	71
Spinal cord ultrasound	90	91	78	100
Echocardiogram	81	94	100	94
Exclusion of oesophageal atresia documented	91	99	No referral required	No referral required
Urinary tract ultrasound	98	97	100	100
Documented limb examination	94	96	100	100